

KOLOSOV, A.V.

SPERANSKIY, I.I.; KOLOSOV, A.V.

Manifestations of parabiosis of the neuroglandular system of the stomach in peptic ulcer. Klin.med., Moskva no.3:42-50 Mr '50.  
(GIML 19:2)

1. Of the Clinic of the Institute of Therapy (Director -- Prof. A.L.Myasnikov, Active Member of the Academy of Medical Sciences USSR) of the Academy of Medical Sciences USSR.

KOLOSOV, A. V.

"Study of the Secretory Reaction of the Gastric Glands to Chemical Stimulants of Various Intensity in Persons with Stomach Ulcers." (Dissertation for Degree of Candidate for Medical Sciences) Acad Med Sci USSR, Moscow, 1955

SO: M-1036 28 Mar 56

*Kolosov, A.V.*

USSR/Pharmacology and Toxicology - Cardiovascular Agents.

V-6

Abs Jour : Ref Zhur - Biol., No 21, 1950, 98541

Author : Kolosov, A.V., Belyayeva, H.K., Bitkova, S.I.  
Inst : -

Title : Prolonged Treatment of Patients with Hypertensive Disease  
by Reserpine (Serpasil) in Polyclinic Conditions.

Orig Pub : Klinich. meditsina, 1950, 36, No 3, 58-65.

Abstract : Treatment of 180 patients with hypertensive disease by reserpine (I) was conducted in polyclinic conditions. The treatment with I was started with small doses (0.2-0.4 mg every 24 hours). With the absence of effect, the dosage of I was increased to 0.75 mg, and with a number of patients, to 1.5 mg. I has to be prescribed for a long time and without interruption, since interruption of treatment is accompanied by considerable increase of arterial pressure and worsening of general condition of the patient. Prolonged ambulatory treatment with I of 58% of

Card 1/2

*Inst of Therapy, 22 - Acad Med Sci USSR*

KOLOSOV, A.V.; BELYAYEVA, N.K.

Regression in hypertension. Klin.med. 38 no.6:19-24, Je '60.

(MIRA 13:12)

(HYPERTENSION)

KOLOSOV, A.V.; ALEYEV, I.A.; SERYY, Ye.Ya.; KARMANSKAYA, P.A.

Changes in cutaneous vessels caused by chemical stimulants in elderly and senile persons under the effect of treatment with generally stimulating substances. Vop. geron. i geriat. 4:94-99 '65. (MIRA 18:5)

1. Moskovskoye geriatricheskoye otdeleniye Instituta gerontologii AMN SSSR i Tsentral'naya bol'nitsa Ministerstva zdravookhraneniya RSFSR.

KOLOSOV, A.V., kand.tekhn.nauk; YUSHCHENKO, A.A., gornyy inzh.

Problems of hydraulic fill in working thin pitching seams in the  
Donets Basin. Nauch. trudy MGI no.38:167-179 '61. (MIRA 15:10)  
(Donets Basin—Mine filling)

KOLOSOV, A.V., kand.tekhn.nauk

Recent decisions on the use of rocks in coal mines. Nauch. trudy  
MGI no.38:203-214 '61. (MIRA 15:10)  
(Kuznetsk Basin—Mine filling)

*Kolosov, B. A.*

LIVSHITS, M.L., inzhener; KOLOSOV, B.A., retsentsent, kandidat tekhnicheskikh nauk; VOSKRESENSKIY, N.B., inzhener, redaktor.

[The D6 series high-speed diesel engines] Bystrokhodnye dizeli D 6; v pomoshch' mekhanikam i motoristam. Izd. 2-e, dop. i ispr. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 262 p.  
(Diesel engines) (MIRA 7:12)



LIVSHITS, M.L., inzh.; KOLOSOV, B.A., kand. tekhn. nauk, retsenzent;  
VOSKRESSENSKIY, N.N., inzh., red.; TIKHONOV, A.Ya., tekhn. red.

[High-speed D6 diesel; a manual for mechanics and machinists]  
Bystrokhodnye dizeli D6; v pomoshch' mekhanikam i mashinistam.  
Izd. 3. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry,  
1956. 263 p. (MIRA 11:7)

(Diesel engines)

TKACHENKO, A.T., inzhener (st. Mary); BILLEN'KIY, A.D., inzhener (st. Mary); KOLOSOV, B.A., inzhener (st. Mary)

Method of heating exciter windings and the main generator of diesel locomotives. Zhel.dor.transp. 37 no.7:79-80 J1 '56.  
(MLRA 9:8)

(Diesel locomotives)

BELIKOV, Ye.F., dotsent; VASILENKO, S.S., inzh.; KOLOSOV, B.A., dotsent, retsenzent; VORONIN, V.A., inzh., retsenzent; FILONENKO, A.S., prof., red.; KHROMCHENKO, F.I., red.izd-va; ROMANOVA, V.V., tekhn.red.

[Engineering surveying in planning and constructing hydroelectric power stations] Inzhenerno-geodezicheskie raboty pri proektirovani i stroitel'stve gidroelektrostantsii. Pod red. A.S.Filonenko. Moskva, Izd-vo geodez.lit-ry, 1960. 172 p. (MIRA 13:7)  
(Surveying) (Hydroelectric power stations)

KOLOSOV, B.A., otv. red.

[Summaries and annotations of reports to the 19th Scientific and Technical Conference of the Moscow Construction Engineering Institute] Tezisy dokladov, annotatsii XIX Nauchno-tekhnicheskoy konferentsii Moskovskogo inzhenerno-stroitel'nogo instituta, Moskva, M-vp vysshego i srednego spetsial'nogo obrazovaniia RSFSR, 1960. 263 p. (MIRA 14:8)

1. Moscow. Moskovskiy inzhenerno-stroitel'nyy institut.  
(Civil engineering)

KOLOSOV, Boris Alekseyevich, dots.; VVEDENSKIY, V.P., prof., otv. za  
vypusk.

[Geodetic calculations and graphs] Raschetno-graficheskie raboty po  
geodezii. Moskva, M-vo vysshego i srednego spetsial'nogo obrazova-  
niia RSFSR, 1960. 135 p. (MIRA 14:11)  
(Surveying—Problems, exercises, etc.)

KOIOSOV, B.A., inzh.

Improvement of 1KT compressor pistons. Elek. i tepl. tiaga 4  
no.5:27 My '60. (MIRA 13:7)

1. Depo Mary Ashkhabadskoy dorogi.  
(Diesel locomotives) (Compressors)

SHILOV, Petr Iosifovich; KULESHOV, D.A., prof., retsenzent; KOLOSOV,  
B.A., dots., retsenzent; LEVCHUK, G.P., dots., red.;  
SHURYGINA, A.I., red. izd-va; SUNGUROV, V.S., tekhn. red.

[Geodesy] Geodeziia. Moskva, Izd-vo geodez. lit-ry, 1961.  
392 p. (MIRA 15:2)

(Geodesy)

GIRSHBERG, Moisey Abramovich, dotsent; KOLOSOV, B.A., dotsent,  
retsenzent; GORDEYEV, A.V., dotsent, kand. tekhn. nauk,  
nauchnyy red.; KHRUMCHENKO, F.I., red. 1<sup>zd</sup>-va; SUNGUROV,  
V.S., tekhn. red.

[Collection of problems in geodesy] Zadachnik po geodezii.  
Moskva, Izd-vo geodez. lit-ry. Pt.1. 1961. 287 p.  
(MIRA 15:2)

(Surveying--Problems, exercises, etc.)



KOLOSOV, Boris Alekseyevich; KANAYEVA, I.I., red.

[Graphic analytic problems in surveying] Raschetno-  
graficheskie raboty po geodezii. 2. izd., perer. i dop.  
Moskva, Vysshaya shkola, 1964. 195 p. (MIRA 17:9)

AM5015047

BOOK EXPLOITATION

UR/

Kolosov, Boris Aleksayevich

Computational-graphic operations in geodesy (Raschetno-graficheskiye raboty po geodezii) 3rd ed., rev. and enl. Moscow, Izd-vo "Vysshaya shkola", 1964. 195 p. illus., biblio., append. 5500 copies printed. Editor: I. I. Kanayeva; Technical editors: E. M. Chizhevskiy, N. V. Yashukova; Proofreader: Ye. S. Gudkova

TOPIC TAGS: civil engineering, geodesy, surveying

PURPOSE AND COVERAGE: This is essentially a manual, in which are analyzed the computational and graphic operations involved in the general part of a course in engineering geodesy as studied in the winter instruction period in structural and hydrotechnical specializations in civil engineering and other vuzes. The basic purpose of the manual is to facilitate independent work of the student, primarily students of evening and correspondence divisions, in fulfilling the homework (control) assignments presented in the book. Acquaintance with the information available in a textbook concerning the performance of surveying and leveling operations, with examples of the performance of field documentation, and at-the-

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desk treatment of the results of measurements will bear fruit for the student in his (summer) geodesic training. This manual can be used also in nongeodesic engineering vuzes, and also for courses to improve the qualifications of those already working in the construction industry. This edition has been prepared in accordance with the requirements of new instructions from Gosstroy SSSR on topographic and geodesic operations for urban, small-town, and industrial construction. The materials have been compiled in connection with the content of the latest edition (1963) of the basic textbook in geodesy for students of construction institutes and the faculties of Honored Activist in Science and Technology Professor Doctor P. I. Shilov. The author expresses his gratitude to the Director of the Chair of Engineering Geodesy of the Moskovskiy Inzhenerno-Stroitel'nyy Institut im. V. V. Kuybysheva V. P. Vvedenskiy, to the Director of the Chair of Engineering Geodesy of the Kiyevskiy Inzhenerno-Stroitel'nyy Institut Doctor of Technical Sciences Professor N. G. Viduyev, to the reviewers, Candidates of Technical Sciences Docents P. P. Bykov and P. I. Malov, to Candidate of Technical Sciences A. A. Kurochkin, and to the Managing Editor Docent Candidate of Technical Sciences S. V. Vsmuzdayev.

Card 2/3

AUTHOR: ~~Kolosev, B.L., Engineer~~

SOV-91-58-11-5/20

TITLE: Mechanization of the Loading and Sorting of Balls (Mekhanizatsiya dogruzki i sortirovki sharov)

PERIODICAL: Energetik, 1958, Nr 11, p 14 (USSR)

ABSTRACT: The author describes the working of an automatic loader in the boiler house of the Irkutsk TETs, used for loading balls into the coal-crushing mills, and the resorting and loading of new balls.

Card 1/1

1. Ball mills--Operation

ABRAMOV, S.A., inzh.; ALIFANOV, I.N., inzh.; KARPOV, A.F., inzh.;  
KOROTKOV, A.P., inzh.; KOLOSOV, B.P., inzh.; KUZNETSOV,  
V.S., inzh.; NIKONOV, G.V., inzh.; REPIN, M.I., inzh.;  
SEMENYUCHENKO, G.P., inzh.; SLOBODSKOY, L.M., inzh.;  
TSUKANOV, Ye.V., inzh.; SHIFRIN, M.G., inzh.; BOL'SHAKOV,  
A.S., inzh., retsenzent; KISELEVA, N.P., inzh., red.;  
USENKO, L.A., tekhn. red.

[11D45 diesel locomotive] Teplovozyi dizel' 11D45. Moskva,  
Transzheldorizdat, 1963. 95 p. (MIRA 16:7)  
(Diesel locomotives)

ABUTALIYEV, F.B.; KHOBDABERGANOV, R.Zh.; KOLOSOV, B.V.

Extremum methods for finding the optimal parameters of waste  
rock piling during open-pit mining operations. Izv. AN Uz. SSR.  
Ser. tekhn. nauk 9 no.3:67-76 '65.

(MIRA 18:8)

1. Institut mekhaniki i Vychislitel'nyy tsentr AN UzSSR.

KOLOSOV, D. M.

USSR/Geography - Northwest Siberia

Sep/Oct 52

"Ancient Weathered Crust in Northwest Yakutiya," D. M. Kolosov (Deceased), Inst of Geog, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geograf" No 5, pp 23-25

Article states that specific formation of weathered crust is most frequently found in the Urals. Author extends this study to northern Siberia and the Far East. He concludes that this phenomenon is not bound to southern regions, but took place in northern Yakutiya as well.

226T52

PIMENOV, Aleksandr Nikolayevich, dotsent, kand.tekhn.nauk; MANUKHIN, German Aleksandrovich, dotsent, kand.tekhn.nauk; BUDYKA, S.Kh., dotsent, retsenzent; DONSKOY, I.P., retsenzent; ORLOV, N.N., inzh.; retsenzent; YEGOROV, A.V., inzh., retsenzent; KOLOSOV, D.V., red.; PITERMAN, Ye.L., red.izd-va; BACHURINA, A.M., tekhn.red.

[Mechanizing rafting operations and vessels] Mekhanizatsiia lesosplavnykh rabot i flot. Moskva, Goslesbunizdat, 1959.  
412 p.

(MIRA 13:3)

1. Zaveduyushchiy kafedroy transporta lesa Belorusskogo leso-tekhnicheskogo instituta (for Budyka). 2. Zaveduyushchiy kafedroy vodnogo transporta lesa Lesotekhnicheskoy akademii im. S.M.Kirova (for Donskoy).

(Lumber--Transportation)

NEVSKIY, I.S., kand. med. nauk, polkovnik meditsinskoy sluzhby; ~~ANDRUSENKO, P.P.~~  
kand. med. nauk, polkovnik meditsinskoy sluzhby; ANDRUSENKO, P.P.,  
polkovnik meditsinskoy sluzhby.

Prevention of atherosclerosis in intellectual workers. Voen.-med.  
zhur. no. 1:21-26 Ja '66 (MIRA 19:2)



KOLOSOV, D.Z.; KURILENKO, I.S.

Prevention of vascular crises in elderly age. Vop. geron. i geriat.  
4:185-189 '65. (MIRA 18:5)

1. TSentral'nyy voyennyy Krasnoznamennyy gosptal', Moskva.

KOLOSOV, G.

Efficient promotion of economy. Grazhd. av. 20 no.1:20  
Ja '63. (MIRA 16:4)

1. Zamestitel' nachal'nika Khabarovskogo aeroporta po  
politicheskoy chasti.

(Aeronautics, Commercial--Management)

KOLOSOV, G.N.

Consultation. Zdrav. Ros. Feder. 1 no.2:44-45 F '57. (MLRA 10:7)  
(MEDICAL SERVICE EMPLOYNES)

KOLOSOV, G.

Consultation. Zdrav. Ros. Feder. 1 no. 5:43-44 My '57. (MIRA 10:11)  
(MEDICAL PERSONNEL)

*KOLOSOV, G.*  
KOLOSOV, G.

Consultation. Zdrav.Ros.Feder. 1 no.6:45-46 Je '57. (MLBA 10:8)  
(MEDICAL SERVICE EMPLOYERS)

KOLOSQY, Q.

Consultation, Zdrav. Rns. Fed. 1 no.7:44-45 J1 '57.  
(MEDICAL PERSONNEL)

(MIRA 12:12)

KOLOSOV, G.

Application of the decree of the Ministry of Public Health of the U.S.S.R., No.147, dated September 28, 1957, on "Shorter Working day and additional leave for certain workers in the public health system." Zdrav.Ros.Feder. 2 no.6:48-3 of cover. Je '58.

(MIRA 11:5)

(MEDICAL EMPLOYEES)

KOLOSOV, G.N.

At the board of the Ministry of Public Health of the R.S.F.S.R.;  
the status of public health in Murmansk Province. Zdrav.Ros.Fedr.  
6 no.9:42-43 S '62. (MIRA 15:10)  
(MURMANSK PROVINCE--PUBLIC HEALTH)



KOLOSOV, G.N. (Moskva)

Valuable beginning (work of the bureau of medical care).

Fel'd i akush. 28 no.11:13-15 N°63

(MIRA 16:12)

KOLOSOV, G.Ye. (Moskva); STRATONOVICH, R.L. (Moskva)

Problem concerning the synthesis of an optimum controller solved  
by dynamic programming methods. Avtom. i telem. 24 no.9:  
1165-1173 S '63. (MIRA 16:9)  
(Automatic control)

17

Ye. (Moscow); 1947-1950

**TITLE:** An approximate method for solving the problems of the synthesis of optimal controllers

*Avtomatika i telemekhanika*, v. 25, no. 12, 1984, 1641-1655.

Full controller synthesis, first order system, full-  
approximate solution, least squares, second order system,  
reduced, second order system.

It is pointed out that the methods of dynamic programming recently used extensively in synthesizing optimum controllers make it inaccurate to define the synthesis of a controller to reduce the error of a nonlinear differential equation as a problem of minimizing a performance index. A numerical algorithm for solving the exact solution of this problem is presented. The approximate solution is considered. The algorithm for the exact solution is presented for the case of a nonlinear differential equation.

...tion are not small, the ... diffusion ... of approximate solution ... presented by the author in *Avtomatika and telemekhanika*, v. 23, no. 11, 1962.) How an approximate solution can be obtained by using this method is shown for a control system with the transfer function

$$K(p) = \frac{1}{p^2 + 8p + 1}$$

... process. Balmain's ... and first approximation ... in terms of hermite polynomials ... is derived, too. ... can be applied to the ... orig. art. has: 2 ...

NO REF SOV: 006 OTHER: 002

ATD PRESS: 3160

... (Moscow); Strat. ... ..

TITLE: Continuous control of quasi-harmonic system.

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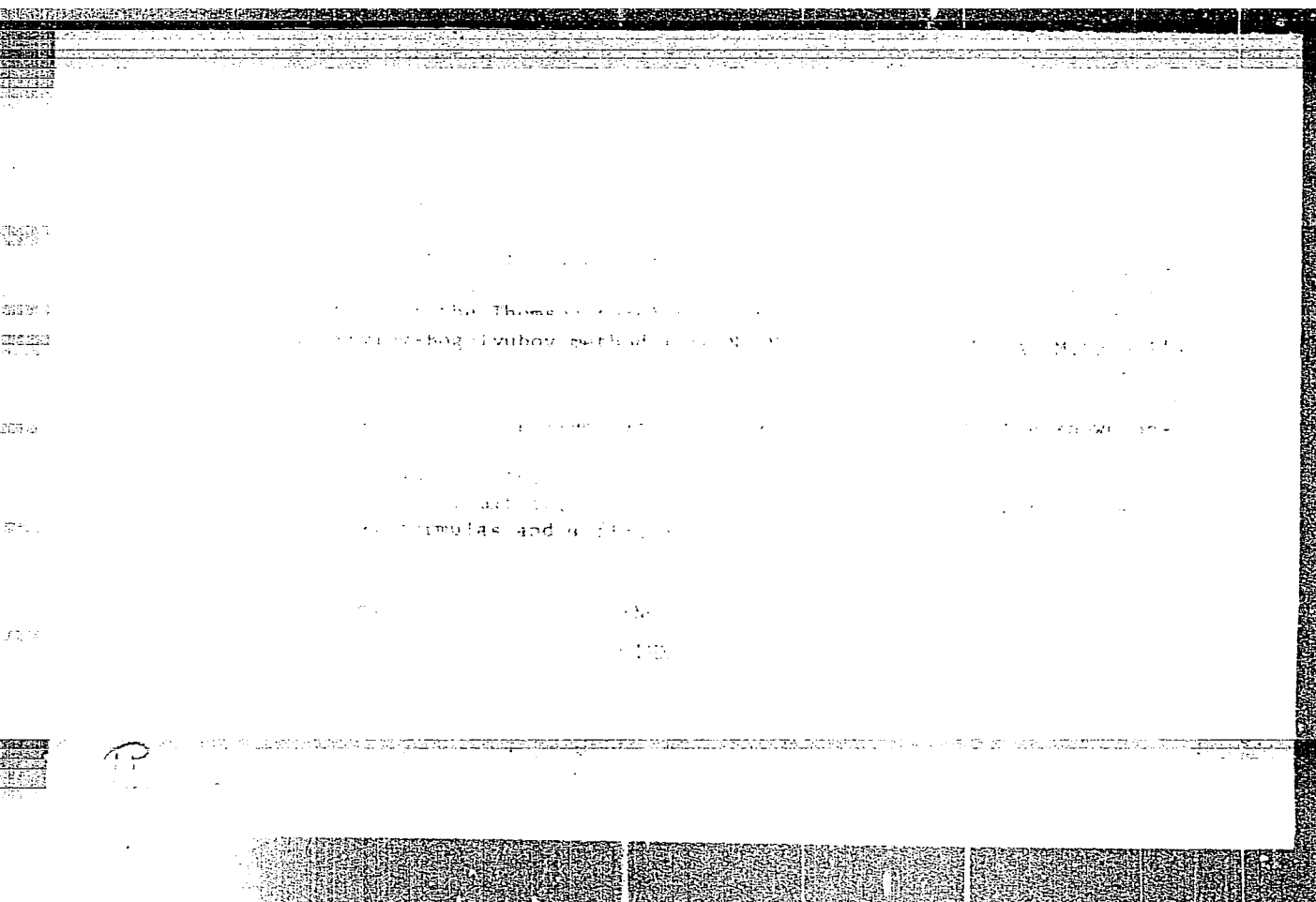
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small parameter  $\chi(x, \dot{x})$  ... ..  
... ..

... .. finding the ... ..  
... ..

$$I[U(\tau)] = \int_{-\infty}^{\infty} f(x(\tau)) \cdot \dot{x}(\tau) d\tau \quad (3)$$



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ACC NR: AP6007173

SOURCE CODE: UR/0188/66/000/001/003/0014

AUTHOR: Kolosov, G. Ye.

ORG: General Physics for Mechanics and Mathematicians Department, Moscow University  
(Kafedra obshchey fiziki dlya mekhmata Moskovskogo universiteta)

TITLE: Synthesis of statistical automatic control systems optimal for various quality criteria

SOURCE: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 1, 1966,  
3-14

TOPIC TAGS: optimal automatic control, dynamic programming, mathematic analysis

ABSTRACT: Problems of synthesizing automatic systems for tracking a stray coordinate optimal for various criteria are solved by dynamic programming methods. Results of a numerical solution permitting a comparison of these systems are cited. The problem of synthesizing an optimal system in which the feedback principle is used is solved, for which purpose the Bellman equations are derived. From these equations it is apparent that their solution is equivalent to solving the problem of synthesizing an optimal controller. The author thanks R. L. Stratonovich for formulating the problem and for his valuable advice. Orig. art. has: 2 tables, 1 figure, and 60 formulas. UDC: 62-505.5

MLP  
Card 1/1

SUB CODE: 09, 12 SUBM DATE: 30 Jun 64/ ORIG REF: 003/ OTH REF: 002



BORISOGLIBSKIY, G., inzhener, avtor proyektov; KOLOSOV, I., inzhener, avtor proyektov.

New plans for machine-tractor station repair shops. Sel'stroi.8 no.6:15-16  
H-D '53. (MIRA 6:11)

1. Gipromel'khoz Ministerstva sel'skogo khozyaystva SSSR.  
(Machine-tractor stations)

SHCHERBAKOV, V. (Moskovskaya obl.); BOROVKOV, V.; KOZLOV, Yu. (st.  
Alatushevo, Moskovskoy obl.); KOPEYKIN, V. (g. Pushkino);  
KOLOSOV, I. (g. Leningrad); RAKCHEYEV, N. (g. Torzhok); MARTYNOV, K.

Repaired by amateurs. Radio no.8:47-48 Ag '61. (MIRA 14:10)  
(Television—Repairing)

KOLOSOV, I.A., fel'dsher (Valakovo Saratovskoy oblasti)

Tip for regular syringes to be used for injections and instillations.  
Fel'd. 1 akush. 22 no.8:52-53 Ag '57. (MIRA 10:12)  
(SYRINGES)

15-1957-3-2836

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 53 (USSR)

AUTHORS: Kozlov, V. A., Kolosov, I.A.

TITLE: Principal Outlines of the Geological-Structural Subdivisions of Eastern Ciscaucasia (Osnovnyye cherty geologo-strukturnogo rayonirovaniya Vostochnogo Predkavkaz'ya)

PERIODICAL: Novosti neft. tekhniki. Geologiya, 1956, Nr 2, pp 21-25

ABSTRACT: The author gives an outline of the tectonic subdivisions of eastern Ciscaucasia compiled by the AS USSR oil prospecting expedition to the Northern Caucasus. A distinction is made between the eastern part of the northern slope of the Caucasus and the Ciscaucasian border of the downwarp. Within the fold belt of Tertiary rocks on the northern slope, the following features are distinguished: 1) the Terek-Sunzha region with the Terek and Sunzha advanced anticlinal zones, from

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15-1957-3-2836

The Principal Outlines of the Geological-Structural Subdivisions of the Eastern Predkavkaz'ye (North Slope of the Caucasus)

which originate the deep Datykhsko-Kharbidzhinskiy razlom (depth) which stretches diagonally to the Caucasus trend; 2) The Dagestan wedge, a region of uplift in which the faintly delineated Benoyanskaya, Khadumskaya, Kukurttauskaya, and El'damskaya antiklinali (anticlines) may be differentiated; and 3) the Tertiary foothills of Dagestan, consisting of the western and eastern anticlinal zones. The following distinctions are made in the Predkavkaz'ye downwarp: 1) the Terek region, with a great thickness of Pliocene and post-Pliocene rocks, representing a narrow downwarp (trench), consisting of a number of synclinal basins, and bounded by the edge of the northern platform; small uplifts are distributed along this border (Mozdok heights, Chervlennoye, and others); the Terek-Sulak region, situated immediately to the north of the Terek region and characterized by the great thickness and the gentle dips of Pliocene and post-Pliocene rocks; 3) the Kuma region, with two anticlinal zony (zones) - Blagodarnensko-Achikulakskaya /Petrovskoye, Blagodarnenskoye, Budennovskoye, Praskoveyskoye, Pravokumskoye, and Achikulakskoye podnyatiya (uplifts)/

Card 2/3

VOLYNKIN, Yu.M.; ARUTYUNOV, G.A.; ANTIPOV, V.V.; ALTUKHOV, G.V.;  
 BAYEVSKIY, R.M.; BELAY, V.Ye.; BUYANOV, P.V.; BRYANOV, I.I.;  
 VASIL'YEV, P.V.; VOLOVICH, V.G.; GAGARIN, Yu.A.; GENIN, A.M.;  
 GORBOV, F.D.; GORSHKOV, A.I.; GUROVSKIY, N.N.; YESHANOV, N.Kh.;  
 YEGOROV, A.D.; KARPOV, Ye.A.; KOVALEV, V.V.; KOLOSOV, I.A.;  
 KORESHKOV, A.A.; KAS'YAN, I.I.; KOTOVSKAYA, A.R.; KALIBERDIN,  
 G.V.; KOPANEV, V.I.; KUZ'MINOV, A.P.; KAKURIN, L.I.; KUDROVA,  
 R.V.; LEBEDEV, V.I.; LEBEDEV, A.A.; LOBZIN, P.P.; MAKSIMOV,  
 D.G.; MYASNIKOV, V.I.; MALYSHKIN, Ye.G.; NEUMYVAKIN, I.P.;  
 ONISHCHENKO, V.F.; POPOV, I.G.; PORUCHIKOV, Ye.P.; SIL'VESTROV,  
 M.M.; SERYAPIN, A.D.; SAKSONOV, P.P.; TEREENT'YEV, V.G.; USHAKOV,  
 A.S.; UDALOV, Yu.F.; FOMIN, V.S.; FOMIN, A.G.; KHLEBNIKOV, G.F.;  
 YUGANOV, Ye.M.; YAZDOVSKIY, V.I.; KRICHAGIN, V.I.; AKULINICHEV,  
 I.T.; SAVINICH, F.K.; STMPURA, S.F.; VOSKRESENSKIY, O.G.;  
 GAZENKO, O.G., SISAKYAN, N.M., akademik, red.

[Second group space flight and some results of the Soviet  
 astronauts' flights on "Vostok" ships; scientific results of  
 medical and biological research conducted during the second  
 group space flight] Vtoroi gruppovoi kosmicheskii polet i neko-  
 torye itogi poletov sovetskikh kosmonavtov na korabliakh  
 "Vostok"; nauchnye rezul'taty medikobiologicheskikh issledovaniy,  
 provedennykh vo vremia vtorogo gruppovogo kosmicheskogo poleta.  
 Moskva, Nauka, 1965. 277 p. (MIRA 18:6)

ENG-2/ENG(4)/FSS-2/ENG(4)/EXT(1)/FS(v)-3/EEC(k)-2/ENG(v)/ENA(d)/

ENG-2/ENG(4)/FSS-2/ENG(4)/EXT(1)/FS(v)-3/EEC(k)-2/ENG(v)/ENA(d)/

1. I. I. Kolosov, I. A. Loshakov, I. N. ...

... of astronauts during parabolic flight ...

... ...

... flight, control ...

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... series of ...

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... Some astronauts showed unstable ...

Card 1/4

of acceleration. The acceleration was 100 g, 200 g, 300 g, 400 g, 500 g, 600 g, 700 g, 800 g, 900 g, 1000 g, 1100 g, 1200 g, 1300 g, 1400 g, 1500 g, 1600 g, 1700 g, 1800 g, 1900 g, 2000 g, 2100 g, 2200 g, 2300 g, 2400 g, 2500 g, 2600 g, 2700 g, 2800 g, 2900 g, 3000 g, 3100 g, 3200 g, 3300 g, 3400 g, 3500 g, 3600 g, 3700 g, 3800 g, 3900 g, 4000 g, 4100 g, 4200 g, 4300 g, 4400 g, 4500 g, 4600 g, 4700 g, 4800 g, 4900 g, 5000 g, 5100 g, 5200 g, 5300 g, 5400 g, 5500 g, 5600 g, 5700 g, 5800 g, 5900 g, 6000 g, 6100 g, 6200 g, 6300 g, 6400 g, 6500 g, 6600 g, 6700 g, 6800 g, 6900 g, 7000 g, 7100 g, 7200 g, 7300 g, 7400 g, 7500 g, 7600 g, 7700 g, 7800 g, 7900 g, 8000 g, 8100 g, 8200 g, 8300 g, 8400 g, 8500 g, 8600 g, 8700 g, 8800 g, 8900 g, 9000 g, 9100 g, 9200 g, 9300 g, 9400 g, 9500 g, 9600 g, 9700 g, 9800 g, 9900 g, 10000 g. The acceleration was 100 g, 200 g, 300 g, 400 g, 500 g, 600 g, 700 g, 800 g, 900 g, 1000 g, 1100 g, 1200 g, 1300 g, 1400 g, 1500 g, 1600 g, 1700 g, 1800 g, 1900 g, 2000 g, 2100 g, 2200 g, 2300 g, 2400 g, 2500 g, 2600 g, 2700 g, 2800 g, 2900 g, 3000 g, 3100 g, 3200 g, 3300 g, 3400 g, 3500 g, 3600 g, 3700 g, 3800 g, 3900 g, 4000 g, 4100 g, 4200 g, 4300 g, 4400 g, 4500 g, 4600 g, 4700 g, 4800 g, 4900 g, 5000 g, 5100 g, 5200 g, 5300 g, 5400 g, 5500 g, 5600 g, 5700 g, 5800 g, 5900 g, 6000 g, 6100 g, 6200 g, 6300 g, 6400 g, 6500 g, 6600 g, 6700 g, 6800 g, 6900 g, 7000 g, 7100 g, 7200 g, 7300 g, 7400 g, 7500 g, 7600 g, 7700 g, 7800 g, 7900 g, 8000 g, 8100 g, 8200 g, 8300 g, 8400 g, 8500 g, 8600 g, 8700 g, 8800 g, 8900 g, 9000 g, 9100 g, 9200 g, 9300 g, 9400 g, 9500 g, 9600 g, 9700 g, 9800 g, 9900 g, 10000 g.

L 0213+00

ACCESSION NRI AP5007273

For six other cosmonauts are given. Spatial orientation of weightlessness was possible when cosmonauts could not see the aircraft's position. But with the eyes closed, all sensations of their position in space were lost during flight in space. Coordination of movements was tested during "stereotaxograph" (measuring time of total operation, time of single operation, and time of delay in the test. For most cosmonauts the coordination of movements was disrupted at a rate of execution of motor acts but no signs of disruption of coordination. Cosmonauts tried to perform a given task under conditions of weightlessness with the same muscular force as on earth. On the first flight, they all used 250-1250 grams more force than required. These data for V. F. Bykovskiy, who used only 50 grams too much. These data changed gradually with subsequent flights, until by the second to the fifth flight, the cosmonauts used the required force sufficiently stably. Maximum muscular strength measured on a test (compared with horizontal flight) was considerably lowered in conditions of weightlessness (compared with horizontal flight) for the right arm (compared with the left). Individual differences in sensory,



ACCESSION NR: A25001213

motor, and autonomic reactions noted in these tests prove the value  
research in the cosmonaut selection program. Orig. art. [JS]  
4 and 5 tables.

ENCL: 0

OTHER: 11

1237

EWG(j)/FSS-2/EWG(r) SWT(1) FSW(1) EWA(d)/  
Pe-3/Pa-4/Pac-4 Isen-3  
125910302 125910304

... A. V.; Kas'yan, I. I.; ...

The working capacity of man under ... endlessness

... 1965.

... flight, ...

... flight ...  
...  
... above the visual ...  
... bubbles in fluid and the behavior of water ...  
... observations, ...  
... conducted ...  
... At the same time, ...  
... and medical observations ...

AN5013308

Initially he made determinations of the "functional capability" of the analyzer during rhythmic work, which was characterized by a high degree of light sensitivity and a high degree of muscle tone. The analyzer excitability by d-c current, and the number of cosmonaut missions during space flight is expected to be somewhat increased, especially in the case of the following two anomalies: 1) the complexity and the number of the effects of weightlessness; 2) the increasing in the number of the effects of increased gravity; the selection of the cosmonauts and their preparation for flight, the selection of the cosmonauts and their preparation for flight. Particular attention should be paid to the selection of the cosmonauts and their preparation for flight. It should be remembered that the functional capability of analyzer functions participating in the selection of the cosmonauts and their preparation for flight.

NR: AP5013308

an organism has its limitations, and even so, it will be further perfect results that will be achieved in their working areas, to improve control panels, and to improve reliability, and means of ameliorating the effects of weightlessness in construction of spacecraft will be required. It is also the risk that there will be a need for a high level of working capacity of personnel during parabolic flights. It is suggested that the working capacity of personnel during parabolic flights is preparatory work, and that the working capacity of personnel during parabolic flights is preparatory work, and that the working capacity of personnel during parabolic flights is preparatory work.

REF: AP5013308

REF: none

REF: 1008465

ENCL: 00

REF: 1008465

OTHER: 00

1. 3925-66 ESS-2/EET(1)/ES(v)-3 DD/RD  
ACC NR: AP5024151

SOURCE CODE: UR/0216/65/000/005/0633/0646

AUTHOR: Kas'yan, I. I.; Krasovskiy, A. S.; Kolcosov, I. A.; Lomova, M. A.; Lebedev, V. I.; Yurov, B. N.

ORG: none

TITLE: Some physiological reactions of man to short-term weightlessness

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 5, 1965, 633-646

TOPIC TAGS: weightlessness, parabolic flight, human physiology, vestibular analyzer

ABSTRACT: Experiments were conducted with the participation of 31 men (aged 23—38 yr) representing various professions. The subjects were subdivided into 4 groups according to profession. Parabolic flights took place on a jet aircraft where weightlessness could be produced for 40—50 sec. Examinations took place before and after weightlessness and g-forces were 2.5—3.5 g with 2—3 min breaks between parabolas. In all, 120 flights representing 360 parabolas were flown. During the flights, the bioelectricity of the brain (EEG), heat biopotentials (EKG), respiration rate, blood composition, and vestibular reactions were studied. Results are given in Figs. 1 and 2 and Tables 1 and 2. It was concluded that periodic parabolic flights are useful in acquainting cosmonauts with short-term weightlessness and establishing criteria for selecting space-flight crews. No pathological alterations in physiological function or radical deviations in blood morphology or biochemistry were noted as a result of parabolic flights.

Card 1/5

UDC: 629.195:612.829.3

L 3925-66

ACC NR: AP5024151

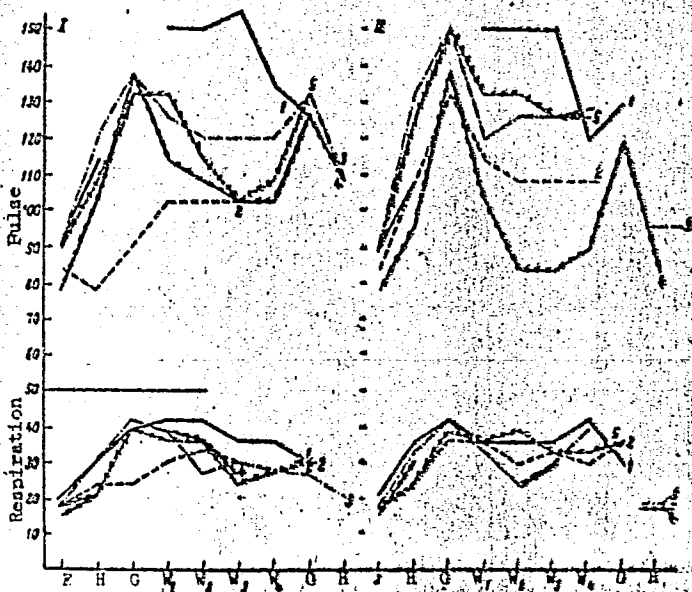


Fig. 1. Change in pulse and respiration rate of a subject at various stages of parabolic flight.

I - First parabola; II - third parabola; 1-5 - sequence of flights; E - Earth; H - horizontal flight; G - g-load; W - weightlessness ( $W_1$  - 10 sec;  $W_2$  - 20 sec;  $W_3$  - 30 sec;  $W_4$  - 40 sec).

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L 3925-66  
ACC NR: AP5024151

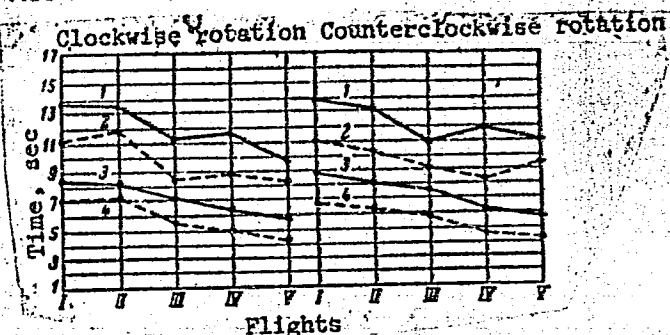


Fig. 2. Duration of postrotational nystagmus (1 - before, 2 - after flight) and counterrotation illusions (3 - before, 4 - after flight) during the performance of a Voyachev otolithic probe

Table 1. Changes in respiration rate at various stages of parabolic flight (compared with horizontal flight prior to weightlessness)

Change in resp. rate	G load	Weightlessness			G load	Horizontal flight
		I parab.	II parab.	III parab.		
Increase	11	9	7	—	8	—
No change	14	19	20	8	13	15
Decrease	3	3	4	—	2	11
No. investigated	28	31	31	8	23	26

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L 3925-66

ACC NR: AP5024151

Table 2. Content of nonesterized fatty acids during parabolic flights (milliequivalents/liter)

Subject No.	1963 flight data	Before flight	After 1st flight	After 2nd flight	Comments
1	12	630	1550*	—	1. No flight before first test
	23	380	660*	660*	"
	12	200	1390*	—	2. First test after normal flight
	16	—	270	260	3. Flight before first test
2	17	—	220	310*	4. No flight before first test
	24	320	380*	—	5. 3 flights before first test
	16	—	290	260*	6. No flights before first test
3	23	260	120*	—	7. 1 flight before first test
	24	—	320	430*	8. No flights before first test
4	17	240	250*	—	"
	26	280	270*	430*	"
	17	440	550*	470	"
5	23	200	320*	760*	9. First test after normal flight
	24	—	320	—	"
	17	—	440*	220	10. No flights before first test
6	23	370	530*	—	11. First test after normal flight
7	26	—	320	300*	

\* Flights simulating weightlessness

Card 4/5

L. 3025-66

ACC NR: AP5024151

After the first exposure to parabolic flight, it was common for the concentration of nonesterized fatty acids to increase. Criteria indicating sufficient stability to short-term weightlessness are: insignificant changes in pulse rate relative to normal values during weightlessness, abbreviated illusions of counterrotation and postrotational nystagmus after a series of parabolic flights, and the absence of unfavorable sensory and vestibular autonomic reactions characterized by spatial illusions, giddiness, or nausea. Orig. art. has: 5 tables and 4 figures. [CD]

SUB CODE: 13/ SUBM DATE: 27May65/ ORIG REF: 024/ OTH REF: 013/ ATD PRESS: 7/20

Card 5/5

YUGANOV, Ye.M.; GORSHKOV, A.I.; KAS'YAN, I.I.; BRYANOV, I.I.;  
KOLOSOV, I.A.; KOPANEV, V.I.; LEBEDEV, V.I.; POPOV, N.I.;  
SOLODOVNIK, F.A.

Vestibular reactions of astronauts during the "Voskhod"  
spaceship flight. Izv. AN SSSR. Ser. biol. no.6:877-883  
M-D '65. (MIRA 18:11)

L 10805-66 PSS-2/ENT(1)/FS(v)-3 DD/MD  
 ACC NR: AF6000254 SOURCE CODE: UR/0209/65/000/011/0027/0032

AUTHOR: Kas'yan, I.; Kopanov, V.; Lebedev, V.; Khlebnikov, G.; Kolosov, I.

ORG: none

TITLE: On an airplane in a state of weightlessness. Results of research

SOURCE: Aviatsiya i kosmonavtika, no. 11, 1965, 27-32

TOPIC TAGS: human physiology, space physiology, weightlessness, parabolic flight

ABSTRACT: Cosmonaut training flights in aircraft equipped with a weightlessness tank are described. Some physiological parameters of the trainees during various stages of the flight are discussed. One series of tests performed on a dynamometer showed that, compared to horizontal flights, during weightlessness the amount of maximum muscular force which can be exerted is reduced by 6—12 kg for the right hand and 4—12 kg for the left hand. This decrease in muscular force is probably connected with the decreased tonus of the skeletal muscles and functional changes in the central nervous system during weightlessness. The coordinograph, a device for measuring changes in fine coordination movements, recorded the total work time for each test, the number of errors, and the time of one movement. Although no disruption in coordination was observed when these tests were conducted during parabolic flight, most cosmonauts showed some lag in the speed of execution of motor acts. Orig. art. has: 2 figures. [JS]

SUB CODE: 06 SUBM DATE: none/

Card 1/1

L 9588-66 FSS-2/ENI(1)/FS(V)-3/EEC(E)-2/EWA(d) 11/DD/RD/CW

ACC NR: AP6000255

SOURCE CODE: UR/0209/65/000/011/0036/0038

AUTHOR: Stepantsov, V. (Candidate of biological sciences); Yeremin, A.  
(Candidate of medical sciences); Kolosov, I.

ORG: None

TITLE: Orientation in unsupported space

SOURCE: Aviatsiya i kosmonavtika, no. 11, 1965, 36-38

TOPIC TAGS: weightlessness, cosmonaut training, space flight simulation

ABSTRACT: In response to letters from readers requesting more details on an article published earlier, the authors present details on the moments of inertia of separate parts of the human body in various positions in unsupported space. A description is given of experiments performed to gain more information on the motor activity of man subjected to a longer (average 30 sec) period of weightlessness, created by an aircraft flying in a Kepler parabola. These experiments confirmed earlier theoretical and experimental data on the different methods of orientation (turning) of man by internal forces around three mutually perpendicular axes of the body. Some of the procedures used by the subject for turning in different.

Card 1/2.

L 9588-66  
ACC NR: AP6000255

directions are described. A study was also made on the most effective way, support (pushing with the hands or pulling) for aimed displacement in a prescribed direction. It was found to be the simplest, most convenient, and most accurate method of displacement, with minimal force on the body. Some other considerations which should be taken into account in selecting the scheme of design of individual means of movement in weightlessness are discussed. Orig. art. has: [08]

SUB CODE: 22, 06 / SUBM DATE: none / ATD PRESS: 4164

HW  
Card 2/2

17411-66 EEG(k)-2/EWT(1)/EWA(d)/FSS-2 SCTB TT/DD/RD/GW  
ACC NR: AP6003450 SOURCE CODE: UR/0216/66/000/001/0003/0013

AUTHOR: Kas'yan, I. I.; Kolosov, I. A.; Kopanev, V. I.; Lebedev, V. I.

ORG: none

TITLE: Physiological reactions of cosmonauts in free space

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 1, 1966, 3-13

TOPIC TAGS: Voskhod 2, parabolic flight, Leonov, Belyayev, weightlessness effect, acceleration effect, nystagmus, motor analyzer

ABSTRACT: The physiological effects of the various training programs in preparation for the Voskhod-2 flight were studied, with special attention given to EVA operations during parabolic flights which lasted 25-30 sec. These exercises by both Leonov and Belyayev took place in a mockup of Voskhod-2 which was situated in the cabin of the flying laboratory. Prior to each operation, Leonov had to locate his backpack containing the automatic life-support systems, attach it to himself, check out the hardware with Belyayev, and equalize the air-lock and cabin pressure. After this, he would enter the air-lock, don his hermetic helmet, check the position of the light filters, the oxygen supply, and the spacesuit for leaks. Belyayev would then close the cabin hatch, depressurize the air-lock, and open its hatch through which Leonov would then egress. Leonov would then conduct as many egress and return operations as necessary. It was found that to perfect moving through the lock

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UDC: 612:629.195.2

L 17411-66

ACC NR: AP6003450

0

took no less than 2—3 parabolic flights. The results of these tests are shown in Table 1. To perfect approach and especially egress required considerable practice; Leonov required 6 practice egresses and 4 practice approaches. His first three egress operations took 19—20 sec in contrast to 6—8 sec in subsequent runs. Leonov's impressions during one of the last training flights were as follows: "The flight went well. I did not feel any uncomfortable sensations. They were the same as those experienced in earlier flights. The spacesuit limits movements somewhat, and the helmet limits the visual field. The approach to the lock was easily executed since pulling on the umbilicus provided fulcrum and established the direction of motion. Approaches and egresses can be smoothly executed. Apparently, any operation can be completed during weightlessness without noticeable disruption of coordination when there is the smallest point of support." Some results of physiological observations made during training flights are given in Table 2, which shows some differences in the reactions of the cosmonauts. Table 3 shows that cardiovascular reactions were as expected. Motor activity studied during the training flights showed that Leonov had a tendency to take slightly longer than normal to complete various operations during acceleration and weightlessness, as shown in Table 4. The results of vestibular tests before and after training flights are given in Table 5; they demonstrated that the vestibular stability of Leonov and Belyayev was sufficiently high. It was concluded that the need for the on-the-ground modeling of cosmonaut activities has increased as has the need for space-craft and space-station mockups which can be used during parabolic flights. These

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L 17411-66

ACC NR: AP6003450

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Table 1. Proficiency of egresses from and approaches to the lock by cosmonaut A. A. Leonov during parabolic flights on a special aircraft

Egress from the lock			Approach to the lock		
Repe- titions	Time, sec	Proficiency	Repe- titions	Time, sec	Proficiency
1.	20	Turn backwards	1	6	Approach to the side
2	10	Turn to the side	2	7	The same
3	20	"	3	6	"
4	16	Turn forward	4	10	Smooth approach, without
5	12	Turn to the side			turn
6	12	Smooth egress, without turn	5	10	The same
7	8	The same	6	10,7	"
8	8	"	7	9	"
9	12	"	8	10	"
10	8	"	9	10	"
11	5	"	10	10	"
12	5	"	11	10	"
13	10	Slight turn to the side	12	7	"
14	8	Slight turn backwards	13	6	Approach to the side
15	5	Smooth egress, with-	14	9	Smooth approach,
		out turn			without turn
16	6	The same	15	9	The same
17	8	"	16	6	"
18	8	"	17	5	"
19	6	"	18	6	"
20	6	"	19	8	"
			20	6	"

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L 17411-66

ACC NR: AP6003450

Table 2. Reactions of cosmonauts P. I. Belyayev and A. A. Leonov before, during, and after parabolic flight

Cosmonauts	Flight No.	Before flight			During flight				After flight		
		Coloring of facial skin	Motor activity	Speech activity	Coloring of facial skin	Motor activity	Speech activity	Quality of performance of the flight program	Coloring of facial skin	Motor activity	Speech activity
P. I. Belyayev	1					Decreased	Decreased	Slowly, confidently		Decreased	Decreased
	2		Normal		Normal	Normal	Normal	Rapidly, confidently	Normal	Normal	Normal
A. A. Leonov	3					.	.	The same		.	.
	1				Hyperemia	Increased	Increased	Rapidly, confidently	Hyperemia	Increased	Increased
	2		.		.	.	Normal	The same	Hyperemia	.	Increased
	3				Normal	Normal	.	.	Normal	Normal	

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L 17411-66

ACC NR: AP6003450

0

Table 3. Change of pulse and respiration rates in cosmonauts during training flights on a weightlessness parabola (In the numerator—ranges of variation in pulse rate, in the denominator—of respiration rate)

Cosmonauts		Flight No.	Before Flight	In flight				After flight
				Horizontal segment	Acceleration	Weightlessness	Acceleration	
Brief weightlessness (immobilization in working location)								
P. I. Belyayev	1	84-90	90-96	100-114	70-89	102-120	84	
		18-24	15-18	18-26	18-18	19	18	
A. A. Leonov	1	54-60	66-72	84	60-70	84	60	
		21-24	18-24	18	18-21	24	18	
Brief weightlessness (perfecting elements of egress and ingress)								
P. I. Belyayev	1	64	72-78	80-83	76-78	84-88	70	
		12	14-14	16-16	14-14	16-16	12	
	7	68	70-88	80-100	76-88	80-100	78	
		12	12-16	14-20	12-16	14-20	12	
A. A. Leonov	1	68	76-80	80-102	70-80	80-108	80	
		12	14-22	16-24	14-20	18-23	14	
	7	64	70-84	80-80	78-84	82-106	76	
		12	12-14	14-16	12-14	14-16	12	

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L 17411-66

ACC NR: AP6003450

Table 4. Data concerning the motor activity of cosmonauts during flights on Kepler's parabola (averaged data)

Cosmonauts	Total time of execution of complex movement on the coordinograph (sec)				Time of touching "pencil" to terminal of the coordinograph (sec)			
	On ground	During acceleration before weightlessness	During weightlessness	During acceleration after weightlessness	On ground	During acceleration before weightlessness	During weightlessness	During acceleration after weightlessness
P. I. Belayev	4,8 4,72-4,88	3,98 —	4,29 4,08-4,50	3,16 —	0,56	0,27	0,34	0,27
A. A. Leonov	3,9 3,56-4,30	7,12 5,68-8,56	5,18 4,44-5,02	7,22 6,48-7,96	0,25	0,45	0,36	0,39

Note: Ranges of variations during execution of complex movements are listed in the denominator, and averaged data in the numerator.

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L 17411-66

ACC NR: AP6003450

0

Table 5. Change in the duration of postrotational nystagmus and counterrotational illusion (sec) before and after parabolic flights, by Kepler trajectory

Cosmonauts	Flight number	Postrotational nystagmus		Counterrotational illusion	
		Before flight	After flight	Before flight	After flight
P. I. Belyayev	1	12	10	10	7
	7	9	6	8	5
A. A. Leonov	1	15	12	12	11
	7	10	6	9	5

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L 17411-66

ACC NR: AP6003450

flights would entail training cosmonauts to connect joints and conduct various repair operations both inside and outside (on the surface) the mockup (welding, cutting, and riveting, etc.). Orig. art. has: 6 tables and 4 figures. [CD]

SUB CODE: 06/ SUBM DATE: 18Aug65/ ORIG REF: 007/ ATD PRESS: 4206

Card 8/8 nst

L 43979-66 EWT(1)/FSS-2 DD

SOURCE CODE: UR/0177/66/000/008/0060/0062

ACC NR: AP6029423

AUTHOR: Khilov, K. L. (Professor); Kolosov, I. A. (Major, Medical corps); Lebedev, V. I. (Lieutenant colonel, Medical corps); Chekirda, I. F. (Senior lieutenant, Medical corps)

ORG: none

TITLE: Changes in acceleration sensitivity thresholds under conditions of brief weightlessness

SOURCE: Voenno-meditsinskiy zhurnal, no. 8, 1966, 60-62

TOPIC TAGS: weightlessness, acceleration biologic effect, space physiology, human physiology, acceleration tolerance, vestibular training, vestibular analyzer

ABSTRACT: A preliminary step of this investigation involved determining a trend in acceleration sensitivity shifts during brief weightlessness (parabolic flights). After determining the sensitivity of the vestibular analyzer, the following method of judging the sensitivity of the horizontal semicircular canals to angular accelerations was employed: A subject was fixed in a Barany chair with head inclined forward 30° and eyes closed. At first, the chair was rotated at a rate of 180° per 20 sec. If a sensation of rotation did not occur, the chair was then rotated through 360° for 20 and 15 sec with a 3-5 min interval. Only positive acceleration sensitivity thresholds were considered and stopping sensations were neglected. The chair was

UDC: 612.886-06:629.19

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L 43979-66

ACC NR: AP6029423

CIA-RDP86-00513R000823920018-8

rotated manually by a physician. In a few cases, electronystagmograms were recorded. When a subject sensed acceleration, he informed the physician who fixed the onset time with a stop watch. Background data were gathered during normal horizontal flight. Rotation commenced 5 sec after the beginning of weightlessness. The duration of weightlessness periods was 24-26 sec. Before and after weightlessness, head-pelvis forces of 1.8 and 2.0 G lasting 10-12 sec were experienced. Eleven males aged 23-45 were studied and a total of 24 experiments were run. Of this number, three subjects were exposed to weightlessness once, five were exposed twice during a single flight, and six were exposed from two to six times in the course of 2-3 flights. Analysis of the data from weightlessness runs revealed a shift in the threshold sensitivity of the horizontal semicircular canals to angular accelerations. In every case there was an increase in the duration of the rotational time necessary to obtain a threshold sensation which indicated decreased excitability of canal receptor formations. In 4 subjects, rotation sensation occurred at the 15th and 16th sec at a rate of 180° per 20 sec in horizontal flight; at the same rate during weightlessness no threshold sensation was observed. In one subject, a rate of 360° per 20 sec brought on a rotational sensation after 12 sec while during weightlessness, no sensation occurred. In the remaining subjects, the time necessary to induce a manifestation of rotational sensation during weightlessness was increased by 3-11 sec compared to control data taken during horizontal flight. The average elapsed time necessary to evoke threshold rotational sensation increased by 1.7 compared with average background (horizontal flight) values. It was concluded that brief weightlessness following positive accelerations leads to an increase in acceleration sensitivity thresholds. These increases are apparently due to the elimination of the

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L 43979-66

ACC NR: AP6029423

activating influence of otoliths on sensory reactions of the semicircular canals  
as a result of a "loss" of otolith weight. [CD]

SUB CODE: 06/ SUBM DATE: none/ ATD PRESS: 507/

Card 3/3 ULR

L 10970-67

ACC NR: AT6036587

"APPROVED FOR RELEASE: 09/18/2001

CODE CIA-RDP86-00513R000823920018-8

AUTHOR: Kolosov, I. A.; Chekirda, I. P.; Lebedev, V. I.; Khlebnikov, G. F.;  
Kas'yan, I. I.

ORG: none

TITLE: Rotation tests as a method of detecting covert forms of motion sickness  
under conditions of weightlessness. [Paper presented at the Conference on Problems  
of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy  
kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii,  
Moscow, 1966, 214-215

TOPIC TAGS: weightlessness, biologic acceleration effect, coriolis acceleration,  
motion sickness, diagnostic medicine, vestibular analyzer

ABSTRACT: Some Soviet cosmonauts (G. S. Titov, V. V. Nikolayeva-Tereshkova,  
K. P. Feoktistov, B. B. Yegorov) with adequately high vestibular analyzer  
resistance to motion sickness experienced vestibulo-autonomic discomfort  
under conditions of prolonged weightlessness. In this connection, the prob-  
lem of exposing people suffering from vestibular disorders assumes the  
greatest significance. An attempt to identify latent forms of motion sick-  
ness more completely was undertaken.

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ACC NR: AT6036587

data, paleness or redness of facial skin was apparent, and moderate hyperhydrosis was noted as were illusions of changed body position with the eyes closed. Increased salivation and worsened subjective feelings were also noted.

Vestibulo-autonomic discomfort was not observed in the remainder of subjects. The duration of counterrotational illusion and postrotational nystagmus was shortened by 4—6 sec in the majority of subjects, while in others, these indices were not shortened.

At the beginning of rotation in the period of transition from positive G to weightlessness during the second stage, tolerance of angular accelerations during stabilized weightlessness revealed 22.2% more cases of latent motion sickness. In these subjects, the duration of counterrotational illusions increased as compared to their duration during stabilized weightlessness; pronounced paleness of facial skin, lip cyanosis, pronounced, general hyperhydrosis, nausea, hypersalivation, and discomfort in the area of the stomach were observed. The termination of nystagmus could not be fixed relative to the onset of accelerations following weightlessness.

In the opinion of the authors, symptoms of motion sickness during ro-

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L 10970-67

ACC NR: AT6036587

tational tests under conditions of stabilized weightlessness were found for the following reasons: first, under conditions of weightlessness the function of the otolithic component of the vestibular apparatus was modified due to the unusual position of the otoliths (floating state) which led to increased sensitivity to angular accelerations during rotation of the chair; second, manifestations of Coriolis accelerations as a result of Barani chair rotation during parabolic flight.

In those cases when the rotational test was completed in the period of transition from acceleration to weightlessness, additional adequate irritation of the otoliths associated with a sharp switch from a "plus" stimulus to a "minus" took place, facilitating the more rapid accumulation of Coriolis accelerations.

Therefore, the use of a modified rotational test under short-term weightlessness conditions reveals latent forms of motion sickness even in people with high resistance and can be used for prognostic purposes.

Use of the rotational test in the period of transition from acceleration to weightlessness reveals latent forms of motion sickness most effectively.

[W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

KOLOSOV, Il'ya Ivanovich, doktor bil. nauk (1906-1955); RATNER, Ye.I., doktor bil. nauk, prof., otv. red.; VETROVA, I.V., red. izd-va; DOROKHINA, I.N., tekhn. red.

[Absorptive activity of the root systems of plants] Poglotitel'naya deiatel'nost' kornevykh sistem rastenii. Moskva, Izd-vo Akad. nauk SSSR, 1962. 387 p. (MIRA 15:10)  
(Absorption (Physiology)) (Roots (Botany))

VINOGRADOV, Yu.P.; KOLOSOV, I.N.

Bench drilling machine with pneumatic drives. Stan. i instr. 29  
no.3:20 Mr '58. (MIRA 12:1)  
(Drilling and boring machines)

12(2), 18(5)

SOV/128-59-9-21/25

AUTHOR: Kolosov I.N., Engineer

TITLE: Improving Technology of Cylinder Block Moulding

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 9, p 45 (USSR)

ABSTRACT: For providing a water outlet channel in castings of Diesel engine D-40 cylinder block, a sand-core A is used. Formerly, the core had in the middle of it an outlet, determining the place of the core in the mould and ensuring additional ventilation from the core through the mould (Fig 1). As a result of this construction, an aperture in the block casting was formed, which had to be lately closed with a special cover fastened by 4 bolts. Engineers V.I.Istratov and A.P.Buzinov have proposed to make the water outlet channel outside wall continuous, to eliminate the central outlet from the core, and to increase the number of ventilation channels (Fig 2). There are 2 diagrams.

Card 1/1

KOLOSOV, I. S.

KOLOSOV, I. S. --"The Distribution of Breakdown Reserves in an Electric-Power System of Complex Structures." Acad Sci USSR. Moscow, 1956.  
(Dissertation for the Degree of Candidate in Technical Sciences.)

So.: Knizhnaya Litopis', No. 7, 1956.

PLANS I BOOK REFLECTIONS 807/5407

Abstracts from USSR. Strategically important in G.M. Krivonozhko's  
 (Problems of Power Engineering) collection of articles dedicated to Ac-  
 celeration G.M. Krivonozhko's Moscow, 1979. 851 p. Kireva also inserted.  
 2,500 copies printed.  
 Eds. of Publishing House: S.D. Astrakhan, P.V. Dobrov, P.I. Dobrov, and  
 S.M. Boybas, Tech. Eds.: S.A. Prusakov, Editorial Board: A.V. Vinter,  
 Academician (Deceased), V.I. Popov (Resp. Ed.) Corresponding Member,  
 Academy of Sciences USSR, V.I. Veyts, A.S. Frolovskiy, N.A. Brylbovich,  
 E.V. Gushakov, V.I. Bogdanov, Candidate of Technical Sciences, S.I. Gushakov,  
 Candidate of Technical Sciences, M.M. Ibrakov, Candidate of Technical Sciences,  
 and I.E. Buzhikov.

PURPOSE: This collection of articles is intended as a tribute to the memory  
 of Academician G.M. Krivonozhko.  
 CONTENT: The collection contains sixty articles by former students and  
 colleagues of the deceased Academician. The articles deal with problems  
 of a wide range of subjects in the field of power engineering: problems  
 of the regional development of electrical and thermal power engineering;  
 power engineering technology and the physics of combustion. No personalities  
 are mentioned. References are given after most articles.

Chopin, G.G. Power Engineering and the Science of Power Engineering in Kazakhstan	22
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Plavits, I.K. Problems of Power Engineering in the Republic of the Academy of Sciences of the Latvian SSR	36
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Koloso, I.S.



KOLOSOV, I.S.; VDOVCHENKO, M.S.

Certain problems of long term planning of emergency reserve  
requirements of electric power systems. Obshch. energ. no.1:  
43-51 '59. (MIRA 13:2)

(Electric power production)



BOL'SHAKOV, M.N.; KOLOSOV, I.S.; LUGOVOY, V.S.; MATVEYENKO, A.I.

Prospects of developing electric power in Kirghizistan in the near  
future. I.AN Kir. SSR.Ser.est.1 tekhnauk 2 no.7:5-23 '60.  
(MIRA 14:4)

(Kirghizistan—Electric power)

KOLOSOV, I.S.

Redesigning a thermal cracking plant. Neftianik 7 no.2:12-14 F '62.  
(MIRA 15:2)

1. Nachal'nik tsekh No.2 Khersonskogo neftepererabatyvayushchego  
zavoda.

(Kherson—Cracking process)

RACHINSKIY, V.V.; KOLOSOV, I.V.

Determination of the absorption capacity of ion exchange resins  
by a gravimetric method. Zav.lab. 29 no.8:926-927 '63. (MIRA 16:9)

1. Moskovskaya sel'skokhozyaystvennaya akademiya imeni K.A.Timir-  
yazeva.

(Ion exchange resins) (Absorption)

5(2)

AUTHORS:

Zaborenko, K. B., Kolosov, I. V.,  
Fomin, V. V.

SOV/20-123-4-31/53

TITLE:

Determination of the Composition and the Stability Constants of Lead Chloride Complexes by Experiments on the Distribution of the Radioactive Isotope Between Precipitate and Solution (Opredeleniye sostava i konstant ustoychivosti khloridnykh kompleksov svintsa iz opytov po raspredeleniyu radioaktivnogo izotopa mezhdru osadkom i rastvorom)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4,  
pp 688 - 690 (USSR)

ABSTRACT:

A true thermodynamic equilibrium can be obtained in the distribution of a trace element(m)between the precipitate and the solution of an isomorphous compound of the macrocomponent (M) (Ref 1). The authors considered the co-crystallization to be a reversible exchange reaction of ions of the same valence and derive the equilibrium constant of this reaction (Equation 1). However, all activity coefficients are constant in the case of a low concentration of the microcomponent (m) in the solid phase and at an ionic strength of the solution

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Determination of the Composition and the Stability Constants SOV/20-123-4-31/53  
of Lead Chloride Complexes by Experiments on the Distribution of the Radio-  
active Isotope Between Precipitate and Solution

which is kept practically constant. For this reason, the concentration can be substituted for the activities, by including all activity coefficients in the equilibrium constant. The equation (1) may also be used in the case of the distribution of isomorphous ions of the macrocomponent between the surface and the solution (primary ion exchanging adsorption. It was proved that (Ref 1) the presence of ions forming complexes with M or m changes the distribution "constant". Furtheron the value calculated according to equation (1) is called distribution coefficient, with the analytical concentration determined experimentally being substituted for the equilibrium concentration. The change of this coefficient in dependence on the concentration of the complex forming ion points to the existence of complex ions in the solution (examples are given in references 2,3). It can be proved that the change D is entirely determined by the change of the activity. The authors suggested a method of calculation as mentioned in the title. They investigated the distribution in

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Determination of the Composition and the Stability Constants SOV/20-123-4-31/53  
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active Isotope Between Precipitate and Solution

the system  $\text{SrSO}_4\text{-Pb}^{212}\text{-SO}_4\text{-HCl}$  (methods of references 1,4,5).

If the experimental results are expressed by the formula

$D = \frac{x}{y} \frac{1-y}{1-x}$  (2), where  $x$  and  $y$  are the shares of the micro  
and macrocomponents in the precipitate, and  $1-x$  and  $1-y$  the  
corresponding shares in the solution, then  $D_0 = K$  in the absence  
of the complex former; if, however, in the presence of the  
complex former the analytical concentration is substituted  
in formula (2) the distribution coefficient will be a  
function of the concentration of the ions of the complex former.  
After various calculations the authors obtained the formula  
for the distribution coefficient:

$$\frac{D_0}{D} - 1 = \sum \beta_j [\text{Cl}^-]^j \quad (5).$$

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As may be seen,  
equation (5) is similar to the known equations for ion exchange

Determination of the Composition and the Stability Constants SOV/20-123-4-31/53  
of Lead Chloride Complexes by Experiments on the Distribution of the Radio-  
active Isotope Between Precipitate and Solution

and extraction. There are 10 references, 7 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: July 12, 1958, by V. I. Spitsyn, Academician

SUBMITTED: July 5, 1958

Card 4/4

RACHINSKIY, V.V., doktor khim.nauk; TRESHCHOV, A.G.; KOLISOV, I.V.

[Handbook on the use of isotopes and radiation in agriculture]  
Praktikum po primeneniiu izotopov i izlucheni v sel'skom  
khozisistve. Pod obshchei red. V.V.Rachinskogo. Moskva, Mosk.  
sel'khoz.akad. No.5. [Radiochemistry] Radiokhimiia. 1960.  
98 p. (MIRA 14:4)  
(Radioisotopes) (Agricultural research)



L 12362-63

EWI(1)/EWI(m)/EWP(q)/BDS

AFFTC/ASD/ESD-1

RM/JD/JG

S/081/63/010/005/012/075

AUTHOR: Andreyeva, Z. F. and Kolosov, I. V.

TITLE: The use of radioactive isotopes in physico-chemical investigations of rare earth oxalates. Report I. Erbium oxalate

PERIODICAL: Referativnyy zhurnal, Khimiya, no. 5, 1963, 99, abstract 5V44 (Izv. Timiryazevsk, s.-kh. akad., 1962, no. 1, 212 - 221)

TEXT: The solubility of  $\text{Er}_2(\text{C}_2\text{O}_4)_3$  was investigated in solutions of  $\text{KClO}_4$  +  $\text{K}_2\text{C}_2\text{O}_4$  at constant ionic strength  $\mu = 0.10$  and variable concentrations of  $\text{K}_2\text{C}_2\text{O}_4$ . The solubility product of  $\text{Er}(\text{C}_2\text{O}_4)_3$  was calculated to be  $(1.03 \pm 0.56) \cdot 10^{-25}$ . In solutions of  $\text{K}_2\text{C}_2\text{O}_4$ , in the presence of  $[\text{C}_2\text{O}_4] > 5 \cdot 10^{-4}$  g-ion/l there occurs a complex formation among the same ions. In the solution the presence of  $[\text{Er}(\text{C}_2\text{O}_4)]^+$ ,  $[\text{Er}(\text{C}_2\text{O}_4)_2]^-$ , and  $[\text{Er}(\text{C}_2\text{O}_4)_3]^{3-}$  ions is postulated. Thermodynamic instability constants of the complex ions of Er were calculated to be  $K_1 = 1.5 \cdot 10^{-5}$ ,  $K_2 = 6.2 \cdot 10^{-9}$ ,  $K_3 = 9.4 \cdot 10^{-11}$ . Author's abstract.

[Abstractor's note: Complete translation]

Card 1/1

KOLOSOVA, I.F.; KOLOSOV, I.V.

Isolation of the radioactive  $\text{Be}^7$  isotope from cyclotron targets.  
Atom. energ. 15 no.5:422-423 N '63. (MIRA 16:12)

KOLOSOV, I.V.; ANDREYEVA, Z.F., kand. khim. nauk

Physicochemical investigation of the oxalates of rare earth  
elements by using radioactive isotopes. Report No. 2: Oxalates  
of holmium and lutetium. Izv. TSKHA no.6:211-216 '62.

(MIRA 16:6)

(Holmium oxalate) (Lutetium oxalate)

KOLOSOV, I.V.

Solubility and thermodynamic constants of some sparingly soluble  
strontium compounds. Zhur. neorg. khim. 10 no.9:2200-2202 S '65.  
(MIRA 18:10)

KOLOSOV, I. YE.

137-58-5-11011

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 303 (USSR)

AUTHOR: Kolosov, I. Ye.

TITLE: On the Shape of Specimens for Fatigue Testing of Hardened Steels (O forme obraztsov pri ispytanii na ustalost' zakalennykh staley)

PERIODICAL: Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t., 1957, Nr 7, pp 46-48

ABSTRACT: It has been found in fatigue testing of hardened specimens (S) that rupture of the S occurs not at the failure cross section, but at some distance therefrom or in the cylindrical portion of the S held in the collet chuck. The reason for failure of the S in the collet chuck was nonuniform chucking, giving rise to high contact stresses. An increase in the diameter of the S at the point of clamping did not eliminate destruction thereof in the chuck. After a split bronze sleeve was placed between the S and the chuck, no further failure of the S in the chuck was observed. In order that failure occur at the rupture cross section, the shape of the S was changed. Note is taken of the inadequate attention given to the problem of testing hardened steels under conditions of cyclic loadings. 1. Steel--Hardening 2. Steel--Test methods M.Sh.

Card 1/1

SOV/124-59-4-4565

Translation from: Referativnyy zhurnal. Mekhanika, 1959, Nr 4, p 163 (USSR)

AUTHOR: Kolosov, I.Ye.

TITLE: Investigation of the Fatigue Process in Hardened Tool Steels

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1957, Nr 191, pp 87-97

ABSTRACT: The author submits the results of bend tests on samples of tool steels of the U 10 A and KhVG grades in untreated and in hardened states. The basis of the tests amounted to 80 - 100 million cycles. The author shows that a basis of 10<sup>7</sup> cycles is insufficient for the tool steels in question.

V.P. Kogayev ✓

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AUTHOR:

Kolosov, I.Ye.

32-1-37/55

TITLE:

On the Shape of Samples Used for Testing Fatigue of Hardened Steels (O forme obraztsov pri ispytanii na ustalost' zakalennykh staley).

PERIODICAL:

Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 90-91 (USSR)

ABSTRACT:

In the introduction to this paper it is said that, because of the non-uniformity of tests carried out (in the USSR) it is difficult to utilize test results obtained from steel samples of different shapes. In order to obtain uniform data 150 steel samples (shaped as shown in figs. 1 u 2) were subjected in this case to a bending and breaking test. It was found that fractures in the samples do not always occur, as might be expected, at such endangered points as those in the middle of the sample, where the diameter is smaller. Of the 150 samples investigated, 45 broke in their cylindrical part with a smaller diameter, but not in the middle. Further 29 broke at the point where there was a larger diameter, and at the place where they were clamped. In the first case the character of destruction is explained by non-uniform cooling during the harden-

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On the Shape of Samples Used for Testing Fatigue  
of Hardened Steels

32-1-37/55

ing process of the sample. The destruction of the sample at the clamp is explained by the fact that, because both the clamp and the sample are hardened, a higher contact stress is caused at certain points, where points of contact are limited, and besides any damage caused to the surface of the sample by the pressure of the clamp may cause a fracture on the sample. By the introduction of a bronze intermediary layer between the sample and the clamp breakage was made impossible at this point. There are 2 figures and 1 Slavic reference.

ASSOCIATION: Leningrad Polytechnic Institute (Leningradskiy politekhnicheskii institut).

AVAILABLE: Library of Congress

Card 2/2      1. Steels-Fatigue-Test methods      2. Steels-Fatigue-Test results



KOLOBOV, I. Ye., Candidate Tech Sci (diss) --- "Slow breakdown of steel under cyclic loads". Leningrad, 1959. 13 pp (Min Higher Educ USSR, Leningrad Polytech Inst im M. I. Kalinin), 150 copies (KL, No 24, 1959, 137)

28 (5)  
AUTHORS:

Nikolayev, R. S., Kolosov, I. Ye.

SOV/32-25-8-30/44

TITLE:

Analysis of Fracture Surfaces of Fatigue of Cracked Tempered Tool-steels

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 990-991 (USSR)

ABSTRACT:

It has been observed that strongly tempered tool and ballbearing steels have bubble-shape brittle fracture surfaces (F) when they are destroyed by fatigue. These fatigue fracture surfaces (FF) differ from other fracture surfaces by not having a concurrent zone of primary cracks. At the fatigue tests (FT) of tempered tool steels (T) for example of brand U10, KhVG, 9KhS of a hardness of  $R_s = 60 \pm 1$  usually no fatigue cracks (FC) have been observed. The fracture occurs very rapidly without a successive development of (FC) (Ref 3). In the present case it was observed that at a thorough investigation of numerous (F) very fine (FC) were found at the beginning of the plastic fracture (Fig 1 on steel 9KhS). The primary (FC) in tempered (T) are often round and develop near the test surface (Fig 2). These (FC) are of a radial shape and are located immediately underneath the test surface. The reason of this occurrence is not yet known. (FC) of this type also occur at (FT) on samples which were cemented

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Analysis of Fracture Surfaces of Fatigue of Cracked  
Tempered Tool-steels

SOV/32-25-8-30/44

or nitrated (Ref 4). In such cases the lower stress limit of the metal beneath the tempered layer seems to be the cause of the developed (FC). The (FT) of tempered (T) proved that a large part of the samples had primary (FC) of the last-mentioned shape. This kind of (FC) can be well observed with a microscope MBS-2. There are 2 figures and 4 Soviet references.

ASSOCIATION:

Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta i Leningradskiy politekhnicheskiy institut (All-Union Scientific Research Institute of Railroad Transportation and the Leningrad Polytechnic Institute)

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23859

S/123/61/000/010/002/016  
A004/A104

1.1710

AUTHOR: Kolosov, I. Ye.

TITLE: The effect of low heating on the fatigue strength of hardened steel

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 10, 1961, 16 abstract  
10A128 ("Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t,  
1960, no. 5, 39-41)

TEXT: The author elucidated the effect of low heating (some 180°C) on the fatigue strength of hardened 9XC (9KhS) steel of the following composition (in %): C - 0.88; Si - 1.33; Mn - 0.5; P - 0.33; Cr - 1.1; Ni - 0.15. The tests were carried out on a Weler-type B4-8 (VU-8) bracket machine at a speed of 2,300 rpm. It follows from the data obtained that heating to 180°C reduces the fatigue strength magnitude of the steel, the more so the longer the test duration. Data scattering at 180°C is greater than at room temperature.

V. Kolesnik

[Abstractor's note: Complete translation]

Card 1/1